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Teaching Case Article

Sowingo: Promoting Innovations in Dental Office Inventory Management

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Abstract:

Unhappy with erroneous and inefficient inventory management affecting his dental practice, Dr. Bhatti, a seasoned dentist, founded Sowingo in 2012 to create a solution tailor-made for busy health practitioners. Since then, the company enjoyed a few years' unfettered monopoly and grew to have six employees with over a hundred clients under its belt. Despite offering an innovative inventory management system in the market, however, Sowingo is challenged to continue its growth, as potential clients are unwilling to forego the error-prone and manual way of managing inventory. What will be the next strategic direction for Sowingo?

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Teaching Case

Introduction

Dr. Bhatti, a seasoned dentist operating in private healthcare, is frustrated and overwhelmed by the laborious inventory management process of managing inventory within his private dental practice.

“There was a specific moment in time, I came into my practice and had a busy day. The person doing the medical supply ordering was usually an assistant. I had asked a few questions about supply and inventory information, and had a hard time getting the answers I needed quickly.” - Dr. Bhatti

Dr. Bhatti was frustrated with time wasted in keeping track of inventory, and loss of clients due to the lack of supplies when they were needed. After working under such conditions for over ten years, he conceived a tool to assist healthcare practitioners struggling due to the chaotic nature of private medical practices. In 2012, he founded his company, and named it after his eldest daughter, Sofia, and landed on the name Sowingo by adding the words “win” and “go” to the name to attract good fortune.

Sowingo was co-funded by six partners, who Dr. Bhatti bought into the company and became the shareholders of Sowingo. The partnership involves two dentists, one orthopedic surgeon, one hardware engineer, one finance specialist, and one medical doctor.

Aside from Dr. Bhatti who is the Chief Executive Officer (CEO), Sowingo has four full-time employees (including a Chief Financial Officer or CFO), one person in charge of Business Development and two full-time programmers for software development, Website, graphics, and user interface. In addition, two part-time employees occupy the roles of VP Sales and VP Finances. The CFO is overseeing strategic directions while VP Finance takes care of day-to-day finance activities.

“I’ve started a company that does two things for anybody in the private practice healthcare. We do management of industrial supplies, so we track what your supply levels are, what’s expiring, what’s running low, [and] we give you analytics on that. And as an extension of that, we’ve also built a marketplace for suppliers to come on board and showcase their products. This is a unique product.” - Dr. Bhatti

Since its founding, the company quickly grew to service dental practices in and around the City of Toronto where they are headquartered. Sowingo currently operates in the provinces of Ontario, Quebec, British Columbia and Alberta, and hopes to break into other provincial markets in order to meet its target client objectives.

Serving over 100 clients in 2017, Dr. Bhatti is very proud of Sowingo’s success, for a good reason: only a small percentage of micro-sized start-ups survived after five years from its initial formation (Osing 2014). Surviving is even more challenging in the healthcare industry which is amongst the most complex industries due to the significant number of stakeholders involved (Wamba and Ngai

2012). There is always a smile on his face when he thinks of Sowingo being able to defy the odds in such unfavorable prospects.

To Dr. Bhatti's concern, however, the initial growth seems to have lost its steam and client acquisition has plateaued. Every employee in Sowingo strongly believes in the value of the product, but is baffled with the slowed growth. As the person at the helm, Dr. Bhatti is wondering what will be the next strategic direction for Sowingo.

Inventory Management in Dental Clinics

Inventory management within a dental office is a complicated and time-consuming affair. Depending on the size of the facility, one or more people may become the person(s) responsible for ensuring that supplies are ordered in a timely manner, shelves adequately stocked, products easy to find, and inventory tracked and counted.

Within the traditional pen-and-paper system, one or more people keep track of items to be ordered on a log sheet (see Exhibit 1). The person(s) responsible for inventory management, be it an administrator or healthcare provider, often takes another role within the dental office and has to rely upon other co-workers to identify items which need to be reordered. As one Sowingo client noted,

I used to have log sheets. As we had employees from different generations, it was easier to write things down.

Should one of them fail to note these items on the log sheet, however, the dental practice will find itself in an understock situation. To place an order, the person in charge of inventory typically contacts several distributors to obtain the lowest cost for each item that meets the quality standards and requirements. Once the orders are placed, the individual is then required to oversee the deliveries and cross-reference them with purchase orders.

The manual process consumes time from staff otherwise dedicate to patient care. As Motorola Solutions (2012) explained, "even though inventory management is of the utmost importance, most of the nurses and allied healthcare professionals involved in the process are not logistics professionals." As such, in a fast-paced environment like a private dental office, inventory management takes up time and resources that are already inadequate and result in overstock, understock, and/or expired stock.

Dental facilities are renowned for frequent purchases of diverse items in high quantities. This procurement practice means that the dental industry is subject to a high volume of order transactions which require above-average coordination amongst staff. Dental offices would benefit from implementing an automated inventory management system to reduce costs across the supply chain due to their procurement of low-value and high-volume goods (Essig et al. 2015).

The manual inventory management process is not confined only to dental clinics. In the healthcare industry, healthcare providers manage inventory by relying on "information and processes that are stored in the minds and habits of employees" (Dietsche 2016). Understandably, managing inventory under such circumstances is costly: inventory management is estimated to eat up to one-

third of operational budgets (Chandra et al. 2013; Nicholson 2002), and the rising cost of medical equipment directly contributes to healthcare cost overruns (Rousek et al. 2014). The management of most practices desperately needs to be revamped to reduce costs and wastes and to improve quality care.

Sowingo System

Sowingo inventory management system is cloud based and contains five key modules, which address the essential requirements for daily inventory practices at dental offices and also offer unique features to compete against other market solutions. Each of the modules and its features are detailed below.

Inventory Management

The inventory management feature tracks inventory online and facilitates orders of supplies in accordance with product thresholds set by users. This feature ensures that supplies are always available for use without causing overstock or tying too much of the dental facility's capital in inventory. Users can re-order products instantly by clicking the cart icon, and the items are then added to a purchase requisition for purchase orders. Sowingo can also send alerts to users when supplies are approaching expiration (see Exhibit 2). This feature has a dual purpose: (1) users can prioritize the use of supplies nearing expiration in order to avoid product waste, and (2) users can adjust the minimum threshold to better reflect the facility's actual product usage.

Reports & Analytics

With the reports and analytics feature, users have access to detailed reports regarding their consumption and spending, and can receive analytics by email. The data is presented in a user-friendly and relevant fashion (see Exhibit 3). At any given time, users can review historical spending and consumption trends and analyze them in order to be better equipped at handling future purchasing transactions. Analytics for both individual items and total stock is available through Sowingo, and users can specify report time frames as well (e.g., daily, weekly, monthly, quarterly, etc.).

Marketplace

Unlike other inventory management system solutions currently available on the market, Sowingo's marketplace feature (see Exhibit 4) is unique in that users can order from any and every supplier without restriction. In other words, dental facilities with two or more dentists have the freedom of purchasing different brands based on dentists' personal preferences. In addition, the marketplace feature enables users to compare prices of the same item amongst suppliers. The marketplace is Sowingo's differentiating feature as users can purchase directly from vendors without having to exit the software. This unique feature streamlines the purchasing process by allowing users to shop directly from all suppliers, and provides updates as orders progress through shipping and delivery.

Purchase Orders

The Sowingo software has a built-in purchase order feature which users can automatically populate during the day-to-day inventory updates. Through the purchase order feature, users are able to check all orders placed within their dental facility, regardless of whether that order is generated from the purchases within the Sowingo marketplace or outside of the marketplace. Another benefit

of the purchase order feature is that users can mark receipt on partial shipments of a single order and Sowingo will keep the purchase order active until all items are delivered.

Sterilization

The sterilization feature is not intertwined with the rest of the inventory management features. Rather, it is a standalone feature offered at no extra cost by Sowingo to their clients in order to automate a tedious but critical activity: the record-keeping of biological and chemical sterilization tests. According to the guidelines set by the Royal College of Dental Surgeons of Ontario (2010), dental facilities are required to record and store results of these tests. As the test records are often filed manually on paper and stored in boxes, the sterilization feature enables users to document and store this information digitally.

System Implementation and Product Enhancement

Depending on the features and services required by the clients, Sowingo offers three pricing plans: Start, Premium, and Premium Plus (see Exhibit 5). The “Starter Plan” is a free package that offers several basic services and features, including: certifications and renewal management, local marketplace access, and sterilization and compliance record keeping. This plan aims to attract potential customers. The “Premium Plan” offers all the features available in the “Starter Plan”, and provides an integrated solution that allows customers to manage inventory and purchase orders. It also provides the spend and usage reports to empower their customers’ daily practice. Besides these features, the “Premium Plus Plan” offers more advanced features with specialized apps (e.g., scanning and managing implants), real time inventory control (e.g., organizing medications and tracking expiration dates), and data analytics (e.g., comprehensive alerts dashboard).

The implementation of the Sowingo inventory management system is relatively straightforward. Clients must first perform a count of their current inventory and enter the information into the system in order to track and monitor their stock digitally. This step, commonly referred to as “onboarding,” represents one of the biggest challenges the company has faced in terms of growth and client acquisition, as many dental practices cannot afford to shut down or suspend their patient care services in order to count inventory. For clients in need of catered services, Sowingo offers the onboarding service at a rate of \$900 per day for a staff onsite setup (see Exhibit 5). However, it is Sowingo’s preference that clients perform the inventory count themselves in order to familiarize themselves with their products, and ascertain the variety and usage of supplies. And feedback from some clients seem to support Sowingo’s preference.

I put all of our products into the system myself, [and] it took me maybe 3 days. We did have a lot of product but in that way, it [counting inventory by yourselves] was good because number one it saved us money from having Sowingo to come in and [number two] it got me to learn what type of materials we had.

Once the data is entered into Sowingo, clients can begin to use the software to automate inventory management and purchase ordering processes. The system has a built-in feature for purchase orders, where the clients can set up payments and delivery information to fulfill orders. The short implementation period and immediate computerization of previously time-consuming and error-prone procedures are one of the principal selling points of Sowingo. The rapid implementation is also due to Sowingo’s user-friendly interface and intuitive software. The system is designed by

a dentist for dentists, and thus it is easy for the clients to accept and use the system following the implementation. In addition, Sowingo offers training sessions at no extra cost to clients seeking further assistance. The training sessions are often offered at Sowingo's seminars at various locations. They also support the customers via different channels (e.g., phone, web). Nonetheless, clients reveal that using Sowingo requires some time to get used to.

...the changes were quite minimal and the system was so easy to use that there was actually, not much conflict when it came to the system itself. So that's not the issue. The issue I feel was getting the staff onboard. What I mean by onboard is when every time you took an object off the shelf, they needed to record that. So, it was not so much the unwillingness of staff members, it was just a habit. So, it did take some time to wrap your head around everything that needed to be counted.

The Market and Competitors

As far as dental healthcare inventory management systems are concerned, there are several companies who provide similar services to Sowingo and can be viewed as competitors. Exhibit 6 provides a product comparison between Sowingo and its competitors with respect to their inventory management systems and associated features.

Share Dent

Based in London, Ontario, Share Dent was founded in 2002 by a group of five dentists who decided to pool their purchasing power in order to obtain the best price on dental supplies (Share Dent 2017). The founders also created "Inventory Control Efficiency software (ICE)" as a tool to track and manage supplies with the intent to maximize savings, and optimize ordering efficiency (Share Dent 2017). Clients who signed up with Share Dent become partners that contribute to the company's purchasing power. Indeed, the company currently has over 100 dental practices combining their buying leverage to collectively save \$800,000 per annum by bulk ordering supplies and driving out inefficiencies in the supply chain management (Share Dent 2017). More importantly, the company's profits are shared to the partners at the end of each year. Share Dent is an important competitor to Sowingo for a variety of reasons:

- The company was established and has been active in the dental healthcare inventory management market since 2002;
- Share Dent is run by members who are illustrious and accomplished individuals, lending credibility and authenticity to their operations;
- The company is able to attract potential clients seeking a legitimate and reputable software provider;
- Share Dent is based in Canada and catered to the same market as Sowingo, such as Ontario Dental Association's Annual Spring Meeting (2014);
- Clients enjoy the benefits of ownership and profit-sharing by becoming partners of Share Dent;
- The company guarantee that potential clients will save 15-35% overall on money spent on supplies and products (Share Dent 2017); and
- Members has an incentive to promote the company through word-of-mouth or other means because new clients increase Share Dent's purchasing power, resulting in larger savings and profits for all members.

Share Dent has a sound business model, strong relationships with dental product suppliers and distributors, and long-standing reputation. The company also offers a specialized solution to practitioners searching for an inventory management tool that caters to the dental healthcare industry. However, Share Dent does not share information regarding its propriety inventory management system. Furthermore, the company does not disclose membership fees and software usage costs on their website; potential clients are instead told that costs “will be discussed during our first preliminary presentation” (Share Dent 2017). Some clients will be turned off by this approach, preferring to know the costs upfront in a transparent manner. Clients may have to buy in for thousands, and then it will be difficult to recover those funds if they leave.

ZenSupplies

ZenSupplies was founded in 2016 in Illinois, the United States, by a young Russian immigrant man named Tiger Safarov. In 2007, Safarov founded a construction company while pursuing his bachelor’s degree at the Illinois Institute of Technology in Chicago (Safarov 2017b). The construction company built over 100 dental offices which gave Safarov insight into the inventory management challenges plaguing the dental healthcare industry. He noticed dental practices were behaving more like “warehouses,” and realized there was an opportunity to modernize inventory management (Safarov 2017a). Safarov then created a dental supply company whose mission is “to forever change the dental industry through audacious innovation” (ZenSupplies 2017). Today, the company employs six individuals including the founder (ZenSupplies 2017).

Similar to Sowingo, the company touts its solution for a cloud-based inventory management system for dental supplies and products as “innovative” and “life-changing.” Aside from tracking and managing supplies through the Zen software, potential clients can also benefit from the perks that Safarov negotiates with distributors such as free shipping and low unit costs by leveraging the collective purchasing power of his clients. While their monthly cost is higher than Sowingo’s, ZenSupplies offers a one-time fee to set up clients and virtualize their inventory records, and provides a money back guarantee. Exhibit 7 provides a cost comparison between Sowingo and Zen Supplies.

ZenSupplies is a noteworthy competitor to Sowingo for the following reasons (Safarov 2017a; ZenSupplies 2017):

- The company excels in the onboarding of new clients by virtualizing their inventory records for a one-time, low fee;
- ZenSupplies has an objective to service 50,000 dental offices by 2023, and may tap into the Canadian dental healthcare market in order to achieve its goals;
- The company has existing client testimony demonstrating that potential customers can save a minimum of 30 hours per month by using the Zen software to replace antiquated methods of managing inventory; and
- ZenSupplies is growing at a fast pace considering the company secured over 30 offices within the span of 15 months since inception in comparison to 100 offices for Sowingo since 2012.

ZenSupplies is one copycat company considered as competition to Sowingo. While both companies employ six individuals, one-third of ZenSupplies' personnel are dedicated to "customer success" (ZenSupplies 2017). Furthermore, the founder of ZenSupplies works full-time on promoting the company and securing the best deals for his clients through negotiations with distributors. In contrast, as the CEO and founder Dr. Paul Bhatti's primary occupation is still dentist. He is actively managing two dental offices in Brampton and Ancaster, while another full-time employee is in charge of Business Development for Sowingo.

Clixon Group, LLC

Clixon Group, LLC (Clixon) is a software as a service (SaaS) provider for the dental industry. The company was founded by Mike Heath and Pat Goodfellow in Watkinsville, Georgia in the United States. Both individuals worked in the dental industry for over 20 years before starting Clixon (Clixon Group 2017), one of them for famed dental supply distributor Henry Schein¹. Clixon provides a cloud-based solution on a monthly subscription basis following a 30-day free trial (Clixon Group 2017). According to Brinker (2016), the Clixon Group inventory control system is a fully integrated one in that users can track both inventory and purchase orders in a single platform. Sowingo lists Clixon as another copycat company similar to Sowingo but did not consider Clixon as a serious competitor, because the company has not become a household name within the dental community of Ontario and other provinces of Canada despite being in business since 2012.

Grasshopper Mouse

Grasshopper Mouse is another software as a service (SaaS) provider founded in late 2016 in Anaheim, California in the United States. Their claim to fame is that they're "the only complete, cloud-based inventory control system developed especially for the dental practice by dental professionals" (Grasshopper Mouse 2017). The company uses barcode scanning as a method to automate inventory management. According to Brinker (2016), the Grasshopper Mouse inventory control system is also a fully integrated solution in that users can track both inventory and purchase orders in the system. As a recent new entrant to the dental inventory management market, Sowingo does not consider Grasshopper Mouse a serious contender as of yet but will continue to monitor this company's progress.

Marketing Effort

Sowingo's former approach to marketing their product and increasing their customer base relies heavily on door-to-door selling and cold calls from Sowingo sales representatives. The company has since disbanded the sales team because the low number of new client signings does not justify the payroll costs associated with maintaining full-time salespeople. Instead, Sowingo focuses on industry conferences on a yearly basis in key locations across Canada (Ontario, Quebec, British Columbia and Alberta), study clubs/seminars which require nominal sponsorship fees, and alliances with third-party companies who interface with large groups of dentists such as accounting and technological firms. Examples of such marketing events include but are not limited to:

- Ontario Dental Association Annual Spring Meeting
- Pacific Dental Conference in Vancouver

¹ Henry Schein, Inc. is a Fortune 500 company and a global distributor of healthcare dental, animal health, and medical products (Henry Schein 2017).

- Journée dentaires internationales du Québec in Montréal
- DISCOVER Study Club; and
- GTA Periodontics Symposium in Toronto

Recently, Sowingo has begun to expand its presence in the United States. They have opened a virtual office in San Francisco, and have been attending several annual events:

- the Academy of Osseointegration Annual Meeting in Los Angeles
- the Dental Implant Conference hosted by the American Association of Oral and Maxillofacial Surgeons (AAOMS) in Chicago; and
- the AAOMS General Meeting in Chicago

Sowingo also hosts their own seminars at various locations to provide hands-on opportunities for potential clients to experiment with the software and ask questions about implementation, pricing structure, and/or technical support. These seminars usually attract between 10-20 attendees (see an example of an event flyer in Exhibit 8). One client described her experience with Sowingo.

We didn't really know that a system like this [Sowingo] was in existence. When they approached us they basically explained what their system entailed. And I actually pushed for us to get on board with the Sowingo system, primarily for organization purposes and for time management. What I loved about the Sowingo system was that we used to do everything on pen and paper.

The company has also been an active participant of dental advisory committees nationwide (Sowingo 2014), and has partnered with the Ontario Dental Association (ODA) to provide a 35% discount to all its members. However, this approach may be counter-intuitive as Hiatt et al. (2015) show that emerging companies who charge the market rate for their services often generate more business than those who provide affordable pricing to clients.

The contemporary marketing approach has empowered Sowingo to overcome limitations typically affecting start-ups related to networking, such as gain access to large number of potential clients on a national and international scale, reach critical mass and tap into new markets and innovation sources (Colombo et al. 2012). Indeed, Sowingo's partnership with an external accounting firm handling the finances of a considerable number of dentists will enable the company to provide the software solution to said dentists without having to promote or advertise their product themselves. Particularly, the accounting firm will offer the Sowingo software to its dental clients for a small subscription fee in addition to financial services. Such an alliance removes the biggest hurdle for Sowingo, namely reaching and onboarding of potential clients, by tapping into the accounting firm's vast network of dental clients and directly subscribing members to use the Sowingo product, thus liberating resources and time for management to focus on the company's core business. And this approach seems to be working.

Challenges Ahead

While there are many inventory management software tools available in the market, none provides the supplier marketplace platform like Sowingo. Sowingo's marketing approach allows the company to promote its product with little costs. But in the dental industry, dentists are reluctant

to change and even more indisposed to part with their hard-earned money. With the sales growth rate continuously slowing down, Dr. Bhatti did a quick study with existing clients about its product (see Exhibit 9). Presented with overall positive reviews from his clients, Dr. Bhatti is pondering as to what Sowingo need to do to grow his firm.

References

- Brinker, S. P. 2016. "Taking a Systemic Approach to Ordering and Inventory Control to Minimize Practice Overhead," *Side by Side: Informative News & Techniques for the Dental Assistant*. Volume 4. pp. 12-14.
- Chandra, H., Rinkoo, A. V., Verma, J. K., Verma, S., Kapoor, R., and Sharma, R. K. 2013. "Supply Chain Management with Cost-Containment & Financial-Sustainability in a Tertiary Care Hospital," *Journal of Health and Human Services Administration* (36:1), pp. 3-23.
- Clixon Group. 2017. "Clixon Group." from <http://www.clixongroup.com/Index.php>
- Colombo, M. G., Laursen, K., Magnusson, M., and Rossi-Lamastra, C. 2012. "Introduction: Small Business and Networked Innovation: Organizational and Managerial Challenges," *Journal for Small Business Management* (50:2), pp. 181-190.
- Dietsche, E. 2016. "5 Ways to Build Your Case for Inventory Management Technology," *Becker's Hospital Review*. <https://www.beckershospitalreview.com/finance/5-ways-to-build-your-case-for-inventory-management-technology.html>
- Essig, M., Glas, A. H., and Gutmiedl, J. 2015. "Procurement of a Supply Information System: Lessons Learned from the Purchase of an Inventory Management System for C-Parts," *Journal of Enterprise Information Management* (28:3), pp. 377-399.
- Grasshopper Mouse. 2017. "Grasshopper Mouse," in: Grasshopper Mouse. <https://www.ghmouse.com/>
- Hiatt, M. S., Quinet, G., and Ariail, D. L. 2015. "Opportunities and Challenges of Small Business Entrepreneurship: A Conversation with Daniel L. Eberly, Rla," *Journal of Applied Management and Entrepreneurship* (20:3), pp. 108-115.
- Innovation, S. a. E. D. C. 2016. "Key Small Business Statistics," *Industry Canada, Ottawa*, p. 36.
- MarketsandMarkets. 2018. "Healthcare Asset Management Market by Product, Application - Global Forecast to 2023 ", *MarketsandMarkets.com*.
- Martincková, J., and Malindzák, D. 2014. "Adjusted Inventory Management System of Levels of Strategic Goods Differentiated by Using the Abc Method," *The International Journal of Transport & Logistics* (14), pp. 1-7.
- Motorola Solutions. 2012. "Case Study: Saint Luke's Health System Cardiovascular Lab," in: *Commenco. Kansas City, Missouri*
- Nicholson, L. A. 2002. "Improving Inventory Management in Healthcare Systems," *Social and Economic Studies* (51:3), pp. 65-103.
- Ontario Dental Association. 2014. "Asm." from www.oda.on.ca/docman-categories/asm/29-asm14-final-program
- Osing, R. 2014. "Six Tips for Bucking the Small Business Failure Rate," in: *The Globe and Mail. Toronto, Ontario*.
- Rousek, J. B., Pasupathy, K., Gannon, D., and Hallbeck, S. 2014. "Asset Management in Healthcare: Evaluation of RFID," *IIE Transactions on Healthcare Systems Engineering* (4:3), pp. 144-155.
- Royal College of Dental Surgeons of Ontario. 2010. "Infection Prevention and Control in the Dental Office," in: *Royal College of Dental Surgeons of Ontario. Toronto, Ontario*.
- Safarov, T. 2017a. "Controlling Your Dental Supply Costs with Tiger Safarov," <https://www.deliveringwow.com/2017/03/23/2017323controlling-your-dental-supply-costs-with-tiger-safarov/>
- Safarov, T. 2017b. "Tiger Safarov," <https://www.zensupplies.com/our-team/>

- Salamzadeh, A., and Kawamorita Kesim, H. 2015. "Startup Companies: Life Cycle and Challenges," in: the 4th International Conference on Employment, Education and Entrepreneurship (EEE). Belgrade, Serbia.
- Share Dent. 2017. "Share Dent." from <http://www.share-dent.com/>
- Sowingo. 2017. "Featured Partners," in: Sowingo. <https://sowingo.com/partners>
- Wamba, S. F., and Ngai, E. W. T. 2012. "Importance of the Relative Advantage of RFID as Enabler of Asset Management in the Healthcare: Results from a Delphi Study," 45th Hawaii International Conference on System Sciences, Maui: IEEE, pp. 2879-2889.
- Wang, X., Edison, H., Bajwa, S. S., Giardino, C., and Abrahamsson, P. 2016. "Key Challenges in Software Startups across Life Cycle Stages," in: International Conference on Agile Software Development. pp. 169-182.
- ZenSupplies. 2017. "Zen Supplies." from <http://www.zensupplies.com/>

Exhibits

Exhibit 1: Inventory Management Business Processes Using Pen-and-Paper Method

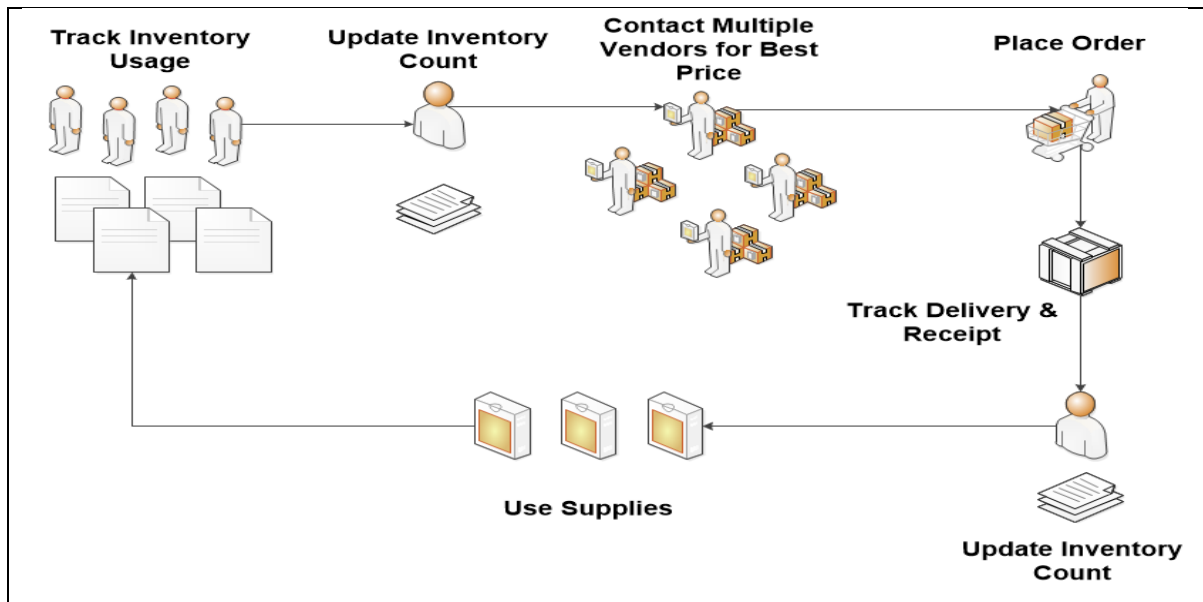


Exhibit 2: Example of the Inventory Management Feature

		OPTIONS		ON HAND	
		BUY	REMOVE		ADD
EXPIRATION ALERTS MINIMUM LEVEL ALERTS	Amazing Powder-Free Nitrile Gloves - (X-Large, Dark Purple) Item expiring Jan 23, 2016	\$24.49		-	1
	AloeTouch Powder-Free Nitrile Gloves - (X-Small) Below minimum level (2)	\$13.99		-	16
	Tray Covers - (Blue) Crosstex	\$24.99		-	2
	SafeMask Premier Plus Earloop Masks - (Blue) Medicom	\$14.95		-	8

Exhibit 3: Example of the Reports & Analytics Feature



Exhibit 4: Example of Vendors Available Through Sowing's Marketplace



Exhibit 5: Sowing Pricing

Items	Rate	Description
Starter Plan	\$0/month Free Forever	Services & Features: <ul style="list-style-type: none"> • Manage certifications and renewals with alerts via email • Marketplace depending on location & association • Sterilization & Compliance Record Keeping
Premium Plan	\$125/month Billed Annually per Office	Starter Plan Features, plus: <ul style="list-style-type: none"> • Manage General Inventory using our Mobile & Web app • Create, send & track purchase orders • Spend & Usage Reports to empower your practice • Premium Support
Premium Plus Plan	\$175/month Billed Annually per Office	Premium Plan Features, plus: <ul style="list-style-type: none"> • Scan and manage implants with our specialized App • Organize medications and track expiration dates • Advanced & comprehensive Alerts dashboard • Advanced Support

Note: The currency in Sowing Pricing is in Canadian Dollars (CAD).

Exhibit 6: Product Comparison Between Sowingo and its Competitors



Modules	Features	Sowingo	Share Dent	ZenSupplies	Clixon Group	Grasshopper Mouse
Inventory and Product Management	Implants	✓				✓
	Common features available	Predictive min/max levels, Unlimited products and supplies, Alerts for product(s) running low, Inventory count entry and display, Alerts for shelf life expiry dates, On-hand quantity adjustments, Inventory item transaction log, Product information				
Reports and Analytics	Custom reports	✓			✓	
	Common features available	Ability to sort, Inventory on-hand, Inventory received, Inventory scanned out, Order history, Product expiration				
Marketplace	Unlimited vendors	✓				
	Group purchasing power		✓	✓		
Purchase Orders	Scheduled requisitions		✓		✓	
	Multi-vendor purchase requisitions	✓		✓	✓	
	Common features available	Auto-generate orders, Email or fax order to vendor directly, Keep order open until all items are received, Allow partial receipt of orders, Purchase order log				
Sterilization	Recordkeeping for biological and chemical sterilization tests	✓				

Exhibit 7: Cost Comparison between Sowingo and ZenSupplies


Cost Items	Sowingo	ZenSupplies
Free Trial	14 days* extended if required	30 days
Setup Fees	FREE	Setup fee*: \$599 - first location \$199 per additional location
Phone Support	ALL PLANS (including FREE)	Only for users with \$129/month +
Devices Supported	Web & All Apple Devices (iPad, iPhone + iPod)	Web & iPad ONLY
Safety/Compliance		
Material Safety Data Sheet (MSDS)	All accounts for Sowingo marketplace purchases currently, however will be expanding it to all purchases	Yes
Certification	Yes	No
Sterilization	Yes	No
Inventory Management		
General Inventory	Yes - starting at \$125/month*	Yes - starting at \$129/month
Medication Inventory	Yes - starting at \$175/month**	No
Implant Inventory	Yes - starting at \$175/month**	No
Marketplace		
Cost to Purchase	FREE	Starting at \$29/month
Discounts	Yes	Yes
Free Shipping	Available, depending on purchases.	Available, depending on purchases.
Flyers	Yes	No
Reports		
	Included in both paid plans	Add on Feature - Advanced Inventory Management
Ordering		
	Included in both paid plans	Add on Feature - Invoice & Process Payments

*Note: The currency in this table is Canadian Dollar (CAD); * included in the Premium Plan; ** included in the Premium Plus Plan.*



Exhibit 8: Sowingo Flyer






Inventory Management for Dental Offices

 **Sowingo Sessions: Free to all Participants + CE Credits**

Sowingo is an online inventory management platform for dental offices. This organizational solution allows you to track and manage supplies and purchases. If you are looking to streamline your existing ordering process and spend more time with your patients, this seminar is for you.

 Thursday, April 20th, 2017	  Located at Rotsaert Dental Laboratory 71 Emerald Street South Hamilton, Ontario
 6:00pm : Registration and Snacks 6:30pm - 8:30pm: Seminar	
 Register at www.sowingo.com	

		
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info@sowingo.com • www.sowingo.com • 1.888.997.3133

Exhibit 9: Client Feedback

Client Feedback

Feedback #1: We don't use the marketplace. Although on the odd time you can go in for comparative purposes, to compare prices which is great, that's not our purpose though. Our primary purpose for Sowingo really is the time management firstly, saving time, not having to write down pen and paper being able to leave and keep a count for Sowingo. Another benefit was for order management.

Feedbacks #2: I would rate after sales A+, 5 stars, 5/5. The reason for that is because they're always asking for feedback. They're always coming to us asking for not just great feedback but negative too. How can we improve our system, how can we make it better? So that's always something that's nice to hear from a system.

Feedback #3: I would love it if you guys could come up with an implant management and they were already working on it because I think someone had request for that and that should be implemented soon. I just met with them last week, they were kind of going over final stages of it. So, I'm really looking forward to that. So that's going to save me so much more time that it already has.

Feedback #4: We are very pleased with Sowingo. Honestly, I would rate them 10/10. There is nothing faulty about it. The system works well. Everything is easy to use, they are very well organized. They even have that online chat. So, I mean what more could you ask of them? So, we have been pretty content with them.

Feedback #5: Because Sowingo was so new, the format of the software was always changing. It looked different from time to time because they would do updates on it. We had to use iPads or iPhones to keep track of it and those come with their own complications I guess. Still pretty convenient to use the software.

Feedback #6: I would say Sowingo cuts that down in half to be honest. It's easier to just check something out on your iPad as opposed to writing it and your inventory. It's all pretty much a press-of-the-button kind of thing, so you don't have to go there and write a list of things.

Feedback #7: Once everyone that you're working with is on board with writing down exactly what they are taking and how many [they are taking], it should be easy. Sometimes it's off because people forget so you do a quick look around but it [Sowingo] definitely cuts back on buying double of products.

Teaching Note

If you are an instructor planning to use this teaching case, please contact the first or second author to obtain a copy of the teaching note.